FEATURE:					PROJECT:					
Klamath River Dams Removal					Klamath River					
	Partia	ıl Removal C	Option		Oregon					
	JC B	Boyle Dam & Powerplant Removal ost Probable Low			AF652	ESTIM	ATE LEVEL	Feasibility		
	Most				MP	UNIT F	PRICE LEVE	Jul-10		
	Life Cycle - 50 Year			FILE:	U:\2011 Projects\	Clamath\002 C	Completed Sheets\MP I	MPL MPH\03 - JC		
	Sum	mary					Probable.xlsx]Life Cycle Summary			
PLANT ACCOUNT	PAY ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT		
		Periodic Cost	s - Year 1					\$299,400.00		
		Periodic Cost	s - Year 17					\$100,600.00		
		Periodic Cost	s - Year 25					\$29,667.63		
		Periodic Cost	s - Year 33					\$52,688.00		
		Periodic Cost	s - Year 50					0.00		
		(Assumes	gov't service / construction contracts)							
		Annual Costs	- Maintenance					\$1,114,593.00		
		Subtotal 1						\$1,596,948.63		
		Mobilizatio	on	5%	+/-			\$80,000.00		
		Subtotal 1 w	ith Mobilization					\$1,676,948.63		
***************************************		Escalation	to Notice to Proceed (NTP): from Unit Price Lev	el (July, 2010)	to NTP (July,	2020)	T	\$269,218.37		
				at 1.5%	per year for	120	months.			
		Subtotal 2 =	Subtotal 1 with Mobilization + Escalation to N	ТР		<u> </u>		\$1,946,167.00		
		Design Co	ontingencies	8%	+/-			\$153,833.00		
		Subtotal 3 =	Subtotal 2 + Design Contingencies					\$2,100,000.00		
		Allowance	for Procurement Strategies (APS)	0%	+/-	1	1	· · · · · · · · · · · · · · · · · · ·		
		Type of solicitation assumed is: Full and open sealed bid Subtotal 4 = Subtotal 3 + APS CONTRACT COST Construction Contingencies FIELD COST		id competition						
								\$2,100,000.00		
	i –							\$2,100,000.00		
				18%	+/-	<u> </u>		\$400,000.00		
								\$2,500,000.00		
		Non-Contr	ract Costs	25%	+/-			\$600,000.00		
		(Environm	ental Cultural / Mitigation ~ 5%, Engineering							
			1%, Maintenance Service Contract ~ 4%							
			ent ~ 1%, Inspections ~ 10%				<u> </u>			
		and Close								
		CONSTRUCT	·					\$3,100,000.00		
		Ref.: For appropriate use and terminology, see Reclamation Man			es and Standa	rds FAC:	LL 09-01_09-02 and	09-03		
	<u> </u>		QUANTITIES	1		PRIC				
BY CHECKED			ву 9	ucoll.		CHECKED	, ,			
			Stephen Latham	1. 4	Greg Akins	_	10	1225/18/11		
			DATE PE			PEER REVIE	WIDATE			
03/24/11			Tom Hepler P.E. 3/25/11	-	REPARED うしらル	-	Na	(1)13/11		
				<u> </u>			1 7/ //	9112111		

FEA	TURE:			PROJECT:						
	Klam	ath River Da	ms Removal	Klamath River						
	Partia	il Removal C	Pption							
	JC Boyle Dam & Powerplant Removal				WOID: AF652 ESTIMATE LEVEL:			Feasibility		
	Most	Probable Lo	ow .	REGION:	MP	UNIT P	RICE LEVEL:	Jan-11		
Life Cycle - 50 Year					FILE: U:\2011 Projects\Klamath\002 Completed Sheets\MP MPL MPH\03 - JC					
	Opera	ation and Ma	intenance - Initial Capital Costs	Boyle\MPL\[JC Boyle - MPL - Probable.xisx]Life Cycle Summary						
PLANT ACCOUN T	PAY		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT		
	1	Remove paint	on downstream face of power	86-68130	900	ft2	\$30.00	\$27,000.00		
		house (assum	ne paint contains heavy metals)							
	2	Furnish, insta	ll, and maintain a 7-foot-high chain	86-68130	1,450	lf	\$50.00	\$72,500.00		
		line fence aro	und both ends of the 14-foot diameter							
		penstock and	the intake structure (assume fence							
		includes two 3	3-foot-wide access gates)		,					
		(assume 1 rep	placement)							
		Estimate a	assume minor paint repair ~ 2%							
	3	Repaint 14-fo	ot-diameter penstock pipe between	86-68130	32,000	ft2	\$3.50	\$112,000.00		
		intake structui	re at dam and headgate structure							
		(assume repa	int 2 times)							
		Estimate a	assume minor paint repair ~ 2%							
	4	Repaint rocke	r bent penstock pipe supports	86-68130	3,000	ft2	\$5.00	\$15,000.00		
		(assume repa	int 2 times)							
		Estimate a	assume minor paint repair ~ 2%							
			<u> </u>				<u> </u>			
	5		ock intake structure trashracks	86-68130	4,200	ft2	\$5.00	\$21,000.00		
		(four separate	11.5-ft-wide by 40-ft-high openings)				-			
	<u> </u>	(assume repa								
	-	Estimate a	assume minor paint repair ~ 2%							
	ļ									
	6		le of fish screen building on top of	86-68130	3,900	ft2	\$5.00	\$19,500.00		
		penstock intak	ke structure							
		(assume repai					 			
		Estimate a	assume minor paint repair ~ 2%							
	7		gate in penstock intake structure	86-68130	510	ft2	\$10.00	\$5,100.00		
		(assume repai	······································				ļ			
			assume minor paint repair ~ 2%					the same and the s		
	8		gate hoist frame	86-68130	2,000	ft2	\$6.50	\$13,000.00		
	ļ	(assume repaint 2 times)					ļk.			
		Estimate a	ssume minor paint repair ~ 2%							
					LIFE CYCLE SUBTOTAL THIS SHEET \$285,100.00					
QUANTITIES					. 11	PRI	CES			
CHECKED					BY Justin CHECKED			Sem delle		
Rick Benik Stephen Latham DATE PREPARED PEER REVIEW / DATE					Grad Akins Munch Juja 4			1-10- 42/11		
		HED	PEER REVIEW / DATE	DATE PRE	5/1/1		PEER REVIEW	5/1/11		
03/21/11			Tom Hepler P.E. 3/24/11	1	0147			1 NUN 3/4/11		

FEAT	TURE:			PROJECT:						
	Klamath River Dams Removal Partial Removal Option				Klamath River Oregon					
	JC Boyle Dam & Powerplant Removal			WOID:	AF652	ESTIMATE LEVEL:		Feasibility		
	Most	Probable Lo	ow .	REGION:	MP	UNIT PI	RICE LEVEL:	Jan-11		
	Life Cycle - 50 Year Operation and Maintenance - Initial Capital Costs			FILE:		Klamath\002 Completed Sheets\MP MPL MPH\03 - JC yle - MPL - Probable.xlsx]Life Cycle Summary				
PLANT ACCOUN T	PAY ITEM		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT		
	9	Repaint stop	log storage beams & columns on	86-68130	1,000	ft2	\$6.50	\$6,500.00		
			re and walkway		.,,===					
		(assume repa								
			assume minor paint repair ~ 2%							
	10		logs for wheel gate	86-68130	1,200	ft2	\$6.50	\$7,800.00		
	ļ	(assume repa					<u> </u>			
		Estimate	assume minor paint repair ~ 2%							
	11		ting 7-ft-high chain link fence	86-68130	180	lf	0	0		
		around headg								
		(fence include (assume repla	es 12-foot-wide access gate)							
			LIFE CYCLE SUBTOTAL THIS SHEET					\$14,300.00		
			LIFE CYCLE TOTAL				1	\$299,400.00		
		C	DUANTITIES	PRICES						
BY Rick Be	enik		CHECKED Stephen Latham	BY 0	Great Akins	,	CHECKED Member	Je 5/11		
DATE PREPARED PEER REVIEW / DATE			DATE PRE	PARED		PEER REVIEW	DATE			
03/21/11			Tom Hepler P.E. 3/24/11	5/4/11			PEER REVIEW / DATE OCO 5/4/11			

FEA'	TURE	1 =		PROJECT:					
Klamath River Dams Removal				Klamath River					
	Parti	al Removal (Option		Oregon				
		oval Site Mai		WOID:	AF484	ESTIM	ATE LEVEL:	Feasibility	
	Most	Probable Lo	ow	REGION	l: MP	UNIT P	PRICE LEVEL	Jul-10	
		Cycle - 50 Ye		FILE:			Completed Sheets\MP		
	Oper	ation and M	laintenance - Periodic Costs	<u></u>	Boyle\MPL\{JC Bo	ryle - MPL - F	Probable.xisx]Life Cycle	3 Summary	
PLANT ACCOUNT	PAY ITEM		DESCRIPTION CODE		QUANTITY	UNIT	UNIT PRICE	AMOUNT	
	1	Site Mainten	nance - Annual		1	LS	\$53,000.00	\$53,000.00	
	'	Olto II	anto - Amadi	1	•		400,000.00	φουμουτίο	
		Labor needed	d ner vear	86-68130	90	mdy*			
		3-Man mainte	· · · · · · · · · · · · · · · · · · ·	100-00.00	130	liney			
			active inspection/maintenance			+			
		 	full time (1 month each spring)			+			
			ys, 2 times each month (5 months)			†			
		<u> </u>	stenance required at JC Boyle,			1			
		1	o 1 & Copco 2			+			
			prorated the time at each dam site based			†			
			nt of total partial removal construction costs						
						†			
		Equipment ne	eeded per year	86-68130	30	dy**			
	1	1-Service truc				1			
		Includes c	compressor, welder, generator			†			
			eneral tools						
			prorated the time at each dam site based						
			nt of total partial removal construction costs			T			
		l							
		I							
		Materials nee	ded per year (percentage of labor	86-68130	15%				
		& equipme	ent)						
		Road mainten	nance needed per year (percentage	86-68130	10%				
		of labor &	equipment)						
		l							
		* Man days pe	er year for 50 years						
		**Days per yer	ar for 50 years						
		Na							
			SUBTOTAL THIS SHEET					\$53,000.00	
			QUANTITIES			PRI	CES		
ЗҮ			CHECKED	ву д	1. An		CHECKED	2-1 -11	
Rick Be	enik	······	Stephen Latham	0	Gred Akins		House	- 572 SY/1	
DATE I	PREPA	RED	PEER REVIEW / DATE	DATE PRE		_//	PEER REVIEW /	DATE	
04/18/11 Tom Hepler P.E. 4/18/11				5,	Alu		DCD	5/4/11	